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StandardGuide for Readily Observable Mold and Conditions Conducive to Mold in Commercial Buildings: Baseline Survey Process¹

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1. Scope

1.1 *Purpose*—The purpose of this *guide*² is to define good commercial and customary practice in the United States of America for conducting a baseline survey for readily observable mold and conditions conducive to mold in a *commercial building* related to a *commercial real estate transaction* by conducting: a *walk-through survey*, document reviews, and interviews as outlined within this *guide*. This *guide* is intended to identify *observable mold* and *physical deficiencies conducive to mold* as a result of moisture and water infiltration through the *commercial building's* envelope or substructure, or generated within the building as a result of processes or mechanical systems, excluding *de minimis observable mold* and *physical deficiencies conducive to mold*. This *guide* is to allow a *user* to assess the potential need for further assessment or other actions that may be appropriate that are beyond the scope of this *guide*. For purposes of this *guide*, the acronym “BSP” or “Baseline Survey Process” is used interchangeably with this *guide's* full title.

1.2 *Purpose Limitations*—While a *BSP* may be used to survey for readily identifiable *mold* and *physical deficiencies conducive to mold*, the *BSP* is not designed to serve as *comprehensive survey* for the presence of *observable mold* and *physical deficiencies conducive to mold* in all or most areas in a commercial building. It is not intended to reduce the risk of the presence of *observable mold* and *physical deficiencies conducive to mold* nor is it to eliminate the risk that *observable mold* and *physical deficiencies conducive to mold* may pose to the building or its occupants.

1.3 *Considerations Beyond This Scope*—The use of this *guide* is strictly limited to the scope set forth in this section. Section 13 of this *guide* identifies, for informational purposes, certain physical conditions (not an all-inclusive list) that may exist at a property and certain activities or procedures (not an all-inclusive list) that are beyond the scope of this *guide* but

may warrant consideration by parties to a *commercial real estate transaction*. The need to investigate any such conditions in the *consultant's* scope of services should be evaluated based upon, among other factors, the nature of the property and the reason for conducting the *BSP*. The scope of such further investigation or testing services should be agreed upon between the *user* and the *consultant* as additional services, which are beyond the scope of this *guide*, prior to initiation of the *BSP* process. The responsibility to initiate work beyond the scope of this *guide* lies with the *user*.

1.3.1 Sampling for mold growth is a non-scope consideration under this *guide*. As noted by EPA 402-K-01-001, sampling cannot be used to assess whether a commercial building complies with federal standards, since no EPA or other federal standards or Threshold Limit Values (TLVs) have been established for mold spores. And, sampling would only produce results reflecting a *specific moment in time* in the best case and could produce inaccurate or misleading results in the worst case.

1.4 *Organization of the Guide*—This *guide* has 13 sections and three appendices. Section 1 defines the Scope. Section 2 is Referenced Documents. Section 3 is Terminology. Section 4 defines the Significance and Use of this *guide*. Section 5 describes User Responsibilities. Sections 6 through 11 provide guidelines for the main body of the *report*, including the scope of the *Walk-through Survey* and preparation of the *report*. Section 12 and Appendix X1 identifying Out of Scope Considerations. Section 13 lists keywords for Internet reference. Appendix X1 provides the *user* with additional *BSP* scope considerations, whereby a *user* may increase this *guide's* baseline scope of due diligence to be exercised by the *consultant*, Appendix X2 provides the *user* with a suggested Interview Checklist, and Appendix X3 provides the *user* with a suggested Field Checklist.

2. Referenced Documents

2.1 ASTM Standards:³

¹ This guide is under the jurisdiction of ASTM Committee E50 on Environmental Assessment, Risk Management and Corrective Action and is the direct responsibility of Subcommittee E50.02 on Real Estate Assessment and Management.

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² Whenever terms defined in Section 3 are used in this guide, they are in *italics*.

³ For referenced ASTM standards, visit the ASTM website, www.astm.org, or contact ASTM Customer Service at service@astm.org. For *Annual Book of ASTM Standards* volume information, refer to the standard's Document Summary page on the ASTM website.

E1527 Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process

E2018 Guide for Property Condition Assessments: Baseline Property Condition Assessment Process

2.2 *Other Document:*

EPA 402-K-01-001 U.S. Environmental Protection Agency, Mold Remediation in Schools and Commercial Buildings, March 2001⁴

3. Terminology

3.1 *Scope*—This section provides definitions, descriptions of terms, and a list of acronyms for many of the words used in this *guide*. The terms are an integral part of the *guide* and are critical to an understanding of the *guide* and its use.

3.2 Definitions:

3.2.1 *architect*—designation reserved by law for a person professionally qualified, examined, and registered by the appropriate governmental board having jurisdiction, to provide architectural services including, but not limited to, analysis of project requirements and conditions, development of project design, production of construction drawings and specifications, and administration of construction contracts.

3.2.2 *building system*—interacting or independent *components* or assemblies, which form single integrated units, that comprise a building and its site work, including, but not limited to, structural frame, roofing, exterior walls, plumbing, HVAC, electrical, and so forth.

3.2.3 *certified industrial hygienist*—an individual who has met the requirements and is in good standing with the American Board of Industrial Hygiene and is qualified to perform services, including, but not limited to, the science and practice devoted to the anticipation, recognition, evaluation, and control of those environmental factors and stresses that may cause sickness, impaired health and well-being, or significant discomfort.

3.2.4 *commercial real estate*—improved real property except a dwelling or property with four or less dwelling units exclusively used for residential use. This term includes, but is not limited to, improved real property used for: industrial, retail, office, hospitality, agriculture, medical, educational, or other commercial purposes; and residential purposes provided that there are more than four residential dwelling units; and property with four or less dwelling units for residential use when it has a commercial function, as in the operation of such dwellings for profit.

3.2.5 *commercial real estate transaction*—for purposes of this *guide*, this term means a transfer of title to (for example, sales/acquisition) or possession (for example, lease) of improved real property, or the receipt of a security interest, mortgage, or the placing of a lien on improved commercial real estate (for example, lending) excepting individual dwellings.

3.2.6 *component*—a portion of a *building system*, piece of equipment, or building element.

3.2.7 *consultant*—the entity or individual that prepares the *BSP* and that is responsible for the observance of and reporting on the presence of *observable mold and physical deficiencies conducive to mold* within a *commercial building* in accordance with this *guide* as defined in 7.1.

3.2.8 *engineer*—designation reserved by law for a person professionally qualified, examined, and licensed by the appropriate governmental board having jurisdiction, to provide engineering services.

3.2.9 *environmental site assessment*—as defined in Practice **E1527**, the process by which a person or entity seeks to determine if a particular parcel of real property (including improvements) is subject to recognized environmental conditions.

3.2.10 *field observer*—the individual who conducts the *walk-through survey*. This *guide* recognizes that for the majority of *commercial buildings* subject to a *BSP*, the *field observer* assigned by the *consultant* to conduct the *walk-through survey* will most likely be a single individual having a general, well rounded knowledge of pertinent *building systems*, *building components*, visible mold characteristics, and conditions conducive to mold growth.

3.2.11 *guide*—a series of options and instructions that do not recommend a specific course of action. See also *standard*.

3.2.12 *interviews*—discussions with those knowledgeable about the building, its construction, and history or who may have information related to the *building systems* or *components*.

3.2.13 *material*—having significant importance or great consequence to the *subject property's* intended use or physical condition.

3.2.14 *occupants*—those tenants, subtenants, or other persons or entities using the property or a portion of the property.

3.2.15 *owner*—generally the fee owner of record of the property.

3.2.16 *practically reviewable*—information that is practically reviewable means that the information is provided in a manner and in a form that, upon examination, yields information relevant to the property without the need for extraordinary analysis of irrelevant data.

3.2.17 *practice*—a definitive procedure for performing one or more specific operations or functions that does not produce a test result.

3.2.18 *property*—the real property that is the subject of the *BSP* described in this *guide*. Real property includes buildings and other fixtures and improvements located on the property and affixed to the land.

3.2.19 *property condition assessment (PCA)*—as defined in Guide **E2018**, the process by which a person or entity observes a property, interviews sources, and reviews available documentation for the purpose of developing an opinion and preparing a property condition report of the improvements.

3.2.20 *property condition report (PCR)*—the work product resulting from completing a PCA in accordance with Guide **E2018**.

⁴ Available from United States Environmental Protection Association (EPA), Ariel Rios Bldg., 1200 Pennsylvania Ave., NW, Washington, DC 20460.

3.2.21 *publicly available*—the source of the information allows access to the information to anyone upon request.

3.2.22 *report*—the written record prepared by the *consultant* and constituting part of a *BSP*, as required by this *guide*.

3.2.23 *standard*—as used in ASTM, a document that has been developed and established within the consensus principles of the ASTM and that meets the approval requirements of ASTM procedures and regulations. This term herein is used interchangeably with *guide* (“this *guide*”).

3.2.24 *sump*—a pit, cistern, cesspool, or similar receptacle where liquids drain, collect, or are stored.

3.2.25 *user*—the person, persons, or entity retaining the *consultant* to conduct the *BSP* in accordance with this *guide*. A *user* may include, but is not limited to, a purchaser, owner, existing or potential mortgagee, lender, or property manager of the building.

3.2.26 *water or moisture*—water as liquid, vapor, or solid (for example, ice, frost, or snow) in any combination or in transition.

3.3 Definitions of Terms Specific to This Standard:

3.3.1 *actual knowledge*—the knowledge actually possessed by an individual who is a real person, rather than an entity. *Actual knowledge* is to be distinguished from constructive knowledge, which is knowledge imputed to an individual or entity.

3.3.2 *baseline*—the minimum level of observations, inquiry, research, document review, and preparation of opinions for conducting a *BSP* as described in this *guide*.

3.3.3 *building department records*—those records of the *local government agency* in which the *property* is located indicating permission of the local government to construct, alter, or demolish improvements on the *property*. Often *building department records* are located in the building department of a municipality or county.

3.3.4 *BSP*—the process described in this *guide*.

3.3.5 *BSP reviewer*—the individual who reviews the *BSP* prior to delivery to the *user*.

3.3.6 *commercial building*—structure except a dwelling or structure with four or less dwelling units exclusively for residential use. This term includes, but is not limited to, structures used for industrial, retail, office, hospitality, agriculture, other commercial, medical, or educational purposes; property used for residential purposes that has more than four residential dwelling units; and structures with four or less dwelling units for residential use when it has a commercial function, as in the operation of such dwellings for profit.

3.3.7 *comprehensive*—complete, thorough, entire, methodical, and detailed.

3.3.8 *dangerous condition*—conditions that may pose a threat or possible injury to the *consultant* and which may require the use of special protective clothing, safety equipment, access equipment, or any other precautionary measures.

3.3.9 *deferred maintenance*—physical deficiencies that cannot be remedied with routine maintenance, normal operating

maintenance, and so forth, excluding *de minimis* conditions that generally do not present a *material physical deficiency* to the *subject property*.

3.3.10 *dismantling*—to take apart or remove any *component*, device, or piece of equipment that is bolted, screwed, secured, or fastened by other means.

3.3.11 *due diligence*—the process of inquiring into the characteristics of a parcel of *commercial real estate*, usually in connection with a *commercial real estate transaction*. The degree, scope, and kind of due diligence vary for different properties and differing purposes of the user.

3.3.12 *dwelling unit*—structure or portion thereof used for residential habitation.

3.3.13 *easily visible*—describes items, *components*, and systems that are conspicuous, patent, and which may be observed visually during the *walk-through* without: intrusion, removal of materials, exploratory probing, use of special protective clothing, or use of special equipment.

3.3.14 *extraordinary physical search*—surveying of confined locations that are difficult to either physically access or observe within a *commercial building*. These locations include, but are not limited to, within wall or false ceiling cavities, mechanical or electrical system chases, wall or duct insulation, on the backing of carpeting, within crawl spaces, or in other inconvenient locations.

3.3.15 *exterior*—that portion of the building not defined herein as *interior*.

3.3.16 *fungi*—(singular fungus) neither animals or plants and are classified in a kingdom of their own. *Fungi* include *molds*, yeasts, mushrooms, and puffballs. In this *guide*, the terms *fungi* and *molds* are used interchangeably.

3.3.17 *health department records*—those records of the *local government agency*, where the *property* is located, with the responsibility to maintain health-related files regarding the *property*. Often *health department records* are located in the Health Department of a municipality or county.

3.3.18 *interior*—the area(s) of any building where people have readily available access and are included in the conditioned space of the structure. Does not include: elevator shafts, basements, garages, cavities, roof top mechanical rooms, and so forth.

3.3.19 *interviews*—those portions of this *guide* that are contained in Section 6 thereof and address questions to be asked of *owners*, *key site managers*, and/or *occupants* of the *property*.

3.3.20 *key site manager*—the person identified by the *owner* of a *commercial real estate* as having good knowledge of the history, uses, management, and physical characteristics of the *commercial building*.

3.3.21 *limited*—not *comprehensive* in scope or purpose.

3.3.22 *local government agencies*—those agencies of municipal or county government having jurisdiction over the *property*. Municipal and county government agencies include, but are not limited to, cities, towns, parishes, townships, and similar entities.

3.3.23 mold—visible fungal growth that may belong to one of three natural classes of *fungi*. The term has no taxonomic significance and is used only in a very general sense of visible fungal growth on organic matter. Fungal *colonies* most commonly found growing in the indoor environment are often called *molds*. All *molds* are *fungi*, but not all *fungi* are considered *molds*. Molds produce *conidia* or *spores* for the purpose of reproduction that are poorly visible or not visible at all to the naked eye, and that in many species are specialized to become airborne. *Fungi conidia* or *spores* are ubiquitous, and *mold* growth can occur virtually anywhere whenever environmental conditions (generally controlled by the presence of moisture) are favorable.

3.3.23.1 Discussion—Note that the term *mold* as used in this guide includes suspected *fungi* and other *visual suspect mold growth*. As no testing is performed under this guide, the *visual suspect mold growth* that may be *observed* pursuant to this guide may or may not be *mold* or *fungi*. In general, for the purpose of this guide, the terms *fungi* and *mold* can be used interchangeably.

3.3.24 moldy odor—see *musty odor*.

3.3.25 musty odor—generic olfactory recognition of moldy or *musty odors* useful for perceiving whether there may be *mold*, *fungal* or other microbial growth in a building.

3.3.26 occupants—those tenants, subtenants, or other persons or entities each of which uses a portion of the leasable area of the *property*.

3.3.27 observe—to conduct an *observation* pursuant to this guide.

3.3.28 observation—the survey of items, systems, conditions, or *components* that are *readily accessible* and *easily observable* during a walk-through survey of the subject *property*.

3.3.29 obvious—that which is plain or evident; a condition or fact that could not reasonably be ignored or overlooked by a *field observer* while *visually observing* the *property*.

3.3.30 physical deficiency conducive to mold—conspicuous or patent defects or significant *deferred maintenance* of a commercial building's building systems and building components as observed during the *field observer's walk-through survey*, excluding *de minimis* conditions that generally do not present a physical deficiency conducive to mold.

3.3.31 readily accessible—describes areas of the building that are promptly made available for *observation* to the *field observer* at the time of the *walk-through* of the building and does not require the removal of materials, personal property, equipment, or similar items and that are safely accessible in the opinion of the *field observer*. Use of extraordinary means and methods to access or observe *suspect materials* render such materials inaccessible (for example, fall protection, mechanical lifts, confined space entry, lockout/tagout, energized systems, and so forth) is excluded. An area is said to be *readily accessible* if it can be observed, and identified in a safe manner without causing objectionable damage to such material or other building materials. The necessity to use ladders or stools to reach ceiling materials, the need to move lay-in ceiling tiles to

view *components* above such lay-in ceilings, the need to remove goods in a retail establishment to look below shelves, or the need to look beneath carpet (at corners or existing holes only) does not render a material inaccessible. The presence of fixtures, furnishings, equipment, or similar items within the area to be assessed or restricted access (that is, locked doors or denied access or authorization to enter) may render materials not *readily accessible*. For example, materials located underground within crawl spaces or below-grade confined areas such as vaults or tunnels, below concrete slabs, or within walls without access panels, shafts, or chases that are not *readily accessible*.

3.3.32 readily observable—describes a physical condition that is *obvious*, *patent*, and *readily accessible*.

3.3.33 reasonably ascertainable—information that is (1) *publicly available*, (2) obtainable from its source within reasonable time and cost constraints, and (3) *practically reviewable*.

3.3.34 reasonably available information—information that is provided and received from the *user* or the party designated by the *user* prior to the *walk-through*.

3.3.35 recognized environmental condition—as defined in Practice E1527, the presence or likely presence of any hazardous substances or petroleum products on a property under conditions that indicate an existing release, a past release, or a material threat of a release of any hazardous substances or petroleum products into structures on the property or into the ground, groundwater, or surface water of the property.

3.3.36 records review—that part that is contained in Section 7 of this guide addresses, which records shall or may be reviewed.

3.3.37 representative observations—*observations* of a reasonable number of samples of repetitive systems, components, areas, and so forth, which are conducted by the *field observer* during the *walk-through survey*. The concept of *representative observations* extends to all conditions, areas, equipment, components, systems, buildings, and so forth to the extent that they are similar and representative of one another.

3.3.38 subject building—referring to the primary building or buildings on the *subject property*, and which are within the scope of the *BSP*.

3.3.39 subject property—the *commercial real estate* consisting of the site and *commercial building* that are the subject of the *BSP* described by this guide.

3.3.40 site visit—the visit to the *subject property* during which *observations* are made constituting the *walk-through survey* section of this guide.

3.3.41 survey—*observations* made by the *field observer* during a *walk-through survey* to obtain information concerning the *subject property's* *readily accessible* and *easily visible components* or *systems*.

3.3.42 suspect fungal growth—visible growth with characteristics of *mold*. Suspect fungal growth cannot be confirmed by the *field observer's* professional judgment without the benefit of sampling. For purposes of this guide, this term is used interchangeably with “*mold*” herein.

3.3.43 *timely access*—entry provided to the *field observer* at the time of the *walk-through*.

3.3.44 *visually and/or physically observed*—during a *site visit* pursuant to this *guide*, this term means *observations* made by vision, or other sensory perception, while performing a *walk-through*.

3.3.45 *walk-through*—a *walk-through* of the *commercial building* to make observations in order to complete the *BSP Checklist* for the potential for *observable mold* and *physical deficiencies conducive to mold*. It is the intent of this *guide* that this *walk-through* should not be considered exhaustive or *comprehensive* in nature and is subject to the limitations of this *guide*.

3.4 Acronyms:

3.4.1 *ASTM*—American Society for Testing and Materials International

3.4.2 *EPA*—Environmental Protection Agency

3.4.3 *ESA*—environmental site assessment

3.4.4 *FIRM*—flood insurance rate map

3.4.5 *HVAC*—heating, ventilation, and air conditioning

3.4.6 *IAQ*—indoor air quality

3.4.7 *OSHA*—Occupational Safety and Health Act or Occupational Safety and Health Agency

3.4.8 *PCA*—property condition assessment

3.4.9 *TLV*—threshold limit value

4. Significance and Use

4.1 *Use*—This *guide* is intended for use on a voluntary basis by parties who wish to obtain a limited survey of *commercial real estate* to assess for *observable mold* and *physical deficiencies conducive to mold* as part of a *commercial real estate transaction*. This *guide* is intended to constitute a *baseline inquiry* using representative observations for the purposes of conducting *due diligence* regarding the actual and potential presence of *observable mold* and *physical deficiencies conducive to mold* in connection with a property. Inquiries that are more and less comprehensive than this *guide* (including, in some instances, no inquiry) may be appropriate in some circumstances in the opinion of the *user* (for example, when the presence of mold is known to the *user*). Furthermore, no implication is intended that a person must use this *guide* in order to be deemed to have conducted *appropriate inquiry* in a commercially prudent or reasonable manner in any particular transaction. Nevertheless, this *guide* is intended to reflect a commercially prudent and reasonable inquiry. However, a *BSP* is not intended to serve as a *comprehensive survey* for the presence of *observable mold* and *physical deficiencies conducive to mold* in all or most of the building systems throughout a *commercial building*. While a *BSP* is intended to reduce the risk of the presence of *observable mold* and *physical deficiencies conducive to mold* within a *commercial building*, it will not, nor is it intended, to eliminate that risk, or remediate *observable mold* and *physical deficiencies conducive to mold*.

4.2 Clarification of Use:

4.2.1 *Specific Point in Time*—Because conditions conducive to mold in a building can vary greatly over time due to changes in weather, interior air handling and conditioning, occupancy, and so forth, a *user* should only rely on the results presented in the *report* for the point in time at which the *BSP* was conducted.

4.2.2 *Site-Specific*—This *guide* is site-specific in that it relates to assessment of *observable mold* and *physical deficiencies conducive to mold* within a specific *commercial building*. Consequently, this *guide* does not address many additional issues raised in *commercial real estate transactions* such as purchases of business entities, or interests therein, or of their assets, that may well involve liabilities pertaining to properties previously owned or operated or other on-site or off-site liabilities.

4.2.3 *Residential Tenants/Purchasers and Others*—No implication is intended that it is currently customary practice for residential tenants of multifamily residential buildings, tenants of single-family homes or other residential real estate, or purchasers of dwellings for one's own residential use, to conduct a *BSP* in connection with these transactions. Thus, these transactions are not included in the term *commercial real estate transaction*, and it is not intended to imply that such persons are obligated to conduct a *BSP* in connection with these transactions for purposes of *appropriate inquiry* or for any other purpose. In addition, no implication is intended that it is currently customary practice for a *BSP* to be conducted in other unenumerated instances (including, but not limited to, many commercial leasing transactions, many acquisitions of easements, and many loan transactions in which the lender has multiple remedies). On the other hand, anyone who elects to do a *BSP* of any *property* or portion of a *property* may, in such person's judgement, use this *guide*.

4.3 *Who May Conduct*—The *walk-through survey* portion of a *BSP* should be conducted by a *field observer* qualified as outlined in Section 7.

4.4 *Additional Services*—As set forth in 11.13, additional services may be contracted for between the *user* and the *consultant*. Such additional services may include an *environmental site assessment*, *property condition assessment* and other issues not included within the scope of this *guide*, examples of which area identified in Section 12 under Out of Scope Considerations.

4.5 *Principles*—The following principles are an integral part of this *guide* and are intended to be referred to in resolving any ambiguity or exercising such discretion as is accorded the *user* or *consultant* in conducting a *BSP* or in judging whether a *user* or *consultant* has conducted *appropriate inquiry* or has otherwise conducted an adequate *BSP*.

4.5.1 *Uncertainty Not Eliminated*—No limited survey of *observable mold* and *physical deficiencies conducive to mold* can wholly eliminate uncertainty regarding the potential for *observable mold* and *physical deficiencies conducive to mold* to be present at a *property*. Performance of a *BSP* pursuant to this *guide* is intended to reduce, but not eliminate, uncertainty regarding the current *observable mold* and *physical deficiencies conducive to mold* at a *property*.